

CLAIMS

1. (original): A bending wave loudspeaker having an operating frequency range and a coincidence frequency which is above the operating frequency range, comprising a resonant panel having a main or major axis and a cross or minor axis and an aspect ratio of at least 2:1, vibration exciting means coupled to the panel to excite the panel into resonance along the cross or minor axis of the panel, and means restraining or preventing resonance along the main or major axis of the panel whereby the panel radiates an acoustic output which is of wide directivity along the cross or minor axis and of narrow directivity along the main or major axis of the panel.
2. (canceled)
3. (currently amended): A loudspeaker according to claim 1 ~~claim 1 or claim 2~~, wherein the vibration exciting means forms the means restraining or preventing resonance along the main or major axis.
4. (original): A loudspeaker according to claim 3, wherein the coupling of the vibration exciting means to the panel is longer than the wavelength of sound in air at the lowest required frequency.
5. (currently amended): A loudspeaker according to claim 3 ~~any preceding claim~~, wherein the vibration exciting means comprises a line of discrete excitors extending along the main or major axis and operated substantially in phase.
6. (original): A loudspeaker according to claim 5, wherein the spacing between the excitors is not substantially greater than half the wavelength in the panel at the highest operating frequency.
7. (currently amended): A loudspeaker according to claim 5 ~~claim 5 or claim 6~~, wherein the line is rectilinear.

8. (currently amended): A loudspeaker according to claim 5 ~~any one of claims 5 to 7~~, wherein the line extends substantially from one end of the panel to the other end.
9. (currently amended): A loudspeaker according to claim 5 ~~any one of claims 5 to 8~~, wherein there are at least four excitors in the line.
10. (currently amended): A loudspeaker according to claim 5 ~~any one of claims 5 to 9~~, wherein the line of excitors is to one side of the median longitudinal axis of the panel.
11. (original): A loudspeaker according to claim 10, wherein the line is on the nodal line of the first lateral bending mode.
12. (currently amended): A loudspeaker according to claim 5 ~~any one of claims 5 to 11~~, wherein the excitors are equally spaced along the line.
13. (currently amended): A loudspeaker according to claim 5 ~~any one of claims 5 to 12~~, wherein the exciter spacing d in the line and the bending stiffness B and areal density μ of the panel substantially conform to the formula:-
$$\frac{B}{\mu} = \left(\frac{cd}{\pi} \right)^2$$
14. (new): A loudspeaker according to any one of claims 1 and 3-13, wherein the panel is rectangular.
15. (new): A loudspeaker according to any one of claims 5-13, wherein the line is rectilinear.
16. (new): A loudspeaker according to claim 15, wherein the panel is rectangular.